

Profile Evidence, Fairness, and the Risks of Mistaken Convictions

Marcello Di Bello (Lehman College, CUNY) and Collin O'Neil (Lehman College, CUNY)

(forthcoming in *Ethics*)

* For valuable comments and discussions, we are grateful to Sean Aas, Ronald Allen, Lalaie Ameeriar, Nicolas Delon, Didier Fassin, Camil Golub, Bernard Harcourt, Sari Kisilevsky, Robert MacDougall, Jennifer Morton, Marsha O'Neil, Duncan Purves, Regina Rini, Umrao Sethi, Seana Shiffrin, George Smith, Jacob Sparks, Travis Timmerman, Massimiliano Tomba, David Wasserman, and to participants in the NYC Early Career Ethicists Workshop and the XII Conference of the Italian Society for Analytic Philosophy, as well as to audiences at the University of Lausanne, Institute for Advanced Study in Princeton, Milan Polytechnic University, and University of Nevada, Las Vegas. We also thank two anonymous reviewers and several associate editors at *Ethics* for very helpful suggestions. Both authors contributed equally to this essay.

Abstract: Many oppose the use of profile evidence against defendants at trial, even when the statistical correlations are reliable and the jury is free from prejudice. The literature has struggled to justify this opposition. We argue that admitting profile evidence is objectionable because it violates what we call “equal protection”—that is, a right of innocent defendants not to be exposed to higher *ex ante* risks of mistaken conviction compared to other innocent defendants facing similar charges. We also show why admitting other forms of evidence, such as eyewitness, trace, and motive evidence, does not violate equal protection.

1 INTRODUCTION

In 1992 a package containing raw opium was delivered to an apartment rented by Neng Vue and Lee Vue, two brothers of Hmong ancestry who lived in the city of Minneapolis. The police monitored the delivery, and the brothers were arrested and brought to trial on opium trafficking charges. To bolster the case against them, the prosecution called an expert witness to the stand who testified that 95 percent of the opium smuggling cases in the Minneapolis area involved people of Hmong ancestry.¹ When paired with the fact

¹ U.S. v. Vue, 13 F.3d 1206 (8th Circuit, 1994).

that the Hmong comprise only 6 percent of the population in the area, the 95 percent estimate yields the following correlation:

Ethnicity: In the Minneapolis area, someone who is of Hmong ancestry is 297 times more likely to be trafficking drugs as compared to someone who is not of Hmong ancestry.²

The brothers were convicted of opium smuggling, and while the correlation between ethnicity and drug trafficking would obviously not have been enough on its own to convict them, it might well have been the tipping point for the jury. The convictions were reversed on appeal, on the grounds that the jury had been improperly invited to “put the Vues’ racial and cultural background into the balance in determining their guilt.”³ Setting aside the legal details of the court’s argument, there is surely something intuitively troubling about admitting evidence like *Ethnicity* at trial. Allowing such evidence to be used against a defendant would seem to wrong the defendant, even when it plays only a supplementary role.

The use of statistics about ethnicity, especially statistics about a disadvantaged and stigmatized ethnicity, may raise special concerns.⁴ But there is also intuitive resistance to admitting the following correlations as evidence against defendants:

Prior Burglary: Someone who has previously been convicted of burglary is 125 times more likely to commit burglary than someone in the general population.⁵

² If the Hmong commit 95% of the opium smuggling crimes and are 6% of population in the area, the remaining 94% of the population must commit only 5% of such crimes. That is, $(.95 / .06) / (.05 / .94) = 297$.

³ U.S. v. Vue, 1213. Many appellate courts have held that evidence like *Ethnicity* is inadmissible, e.g., U.S. v. Cabrera, 222 F.3d 590 (9th Circuit, 2000).

⁴ Annabelle Lever usefully distinguishes two approaches to the issue of racial or ethnic profiling: a statistical discrimination approach which treats racial profiling as one instance of a more general issue and a social construction approach which is primarily concerned with the specific ways in which racial profiling contributes to racial oppression. We are pursuing the former approach here. See her “Racial Profiling and the Political Philosophy of Race,” in *The Oxford Handbook of Philosophy and Race*, ed. Naomi Zack (Oxford: Oxford University Press, 2017), 425–435.

⁵ See Michael Redmayne, “The Relevance of Bad Character,” *Cambridge Law Journal* 61 (2002): 684–714. The U.S. Federal Rules of Evidence 403 forbid, with some exceptions, admitting prior crime evidence. Defendants fit the profile in *Prior Burglar* because of a choice, unlike the profiles in *Ethnicity* and *Bad Environment*. On this, see footnote 48.

Bad Environment: 20% of males brought up in broken homes, addicted to drugs, and unemployed go on to commit serious acts of violence, while only 0.1% of people in the general population commit such crimes.⁶

Ethnicity, *Prior Burglary*, and *Bad Environment* are all examples of what we shall call “profile evidence.” In its incriminating form, profile evidence expresses a positive, non-accidental statistical correlation between bearing a certain property and committing a type of crime. When the correlation is reliable, and the defendant has the property, this evidence is probative of guilt — that is, its addition to the body of evidence would increase, sometimes even substantially, the probability that the fact-finders should assign to the defendant’s guilt.⁷

There is a presumption in favor of admitting probative evidence, since normally this would make the fact-finders more likely to reach accurate verdicts, and accuracy is obviously an important legal value. Of course evidence that ought to enhance accuracy could instead detract from it if fact-finders do not respond appropriately. They might tend to give profile evidence more weight than it deserves, and they might even be persuaded by profile evidence to convict defendants for who they are rather than for what they did. Nevertheless, while such concerns may underlie some of the resistance to the use of profile evidence at trial, they cannot account for all of it. Even on the assumption that fact-finders would respond rationally to *Ethnicity*, *Prior Burglary*, and *Bad Environment*, defendants would still seem to have grounds for complaint if such evidence were used against them.⁸

It is not obvious what those grounds could be. The objection to admitting profile evidence cannot be that such evidence is statistical, because admitting other forms of

⁶ For a similar example, see Anthony Duff, “Dangerousness and Citizenship,” in *Fundamentals of Sentencing Theory*, eds. Andrew Ashworth and Martin Wasik (Oxford: Oxford University Press, 1998), 156.

⁷ For example, *Bad Environment* evidence can make a significant difference to the probability of the defendant’s guilt. Suppose other evidence singles out two individuals, each initially 50% likely to be guilty, where one matches profile BE and the other does not. If someone matching profile BE is 200 times more likely to engage in violence than someone in the general population, the 200:1 ratio can be construed to yield a guilt probability of $200 / (200+1)$, roughly 99.5%.

⁸ The possibility of forming a belief based on profile evidence without any epistemic irrationality, in contexts like this one, has recently been challenged on moral encroachment grounds; see, e.g., Rima Basu, “The Specter of Normative Conflict: Does Fairness Require Inaccuracy?” in *An Introduction to Implicit Bias: Knowledge, Justice, and the Social Mind*, eds. Erin Beeghly and Alex Madva (New York: Routledge, forthcoming); Renée Jorgensen Bolinger, “The Rational Impermissibility of Accepting (Some) Racial Generalizations,” *Synthese* (forthcoming); and Sarah Moss, *Probabilistic Knowledge*, (Oxford: Oxford University Press, 2018). For a critical examination of moral encroachment, see Georgi Gardiner, “Evidentialism and Moral Encroachment,” in *Believing in Accordance with the Evidence: New Essays on Evidentialism*, ed. Kevin McCain (Cham: Springer, 2018). Nothing in our argument will turn on the truth or falsehood of moral encroachment.

statistical evidence is unobjectionable. If DNA is discovered at a crime scene and it matches the defendant's DNA, it would be appropriate to admit statistics about the low frequency of the defendant's genetic profile within the general population. Nor can the objection be that profile evidence cites a generalization about what people like the defendant are more likely to do. Motive evidence, such as the fact that the defendant had recently fought with the victim, is routinely admitted at trial, even though it implicitly invites fact-finders to rely on generalizations like "people who engaged in a heated argument with someone are more likely to kill that person as compared to other people." So what is special about profile evidence?

Some scholars have argued that the problem with profile evidence is that its admissibility at trial may compromise the deterrent effect of punishment.⁹ Other scholars have argued that admitting profile evidence is inconsistent with respecting the autonomy or individuality of defendants.¹⁰ In Section 2, we will explain why these accounts fall short. The failure of these two approaches, however, should not lead us to conclude that the resistance to admitting profile evidence is merely an unwarranted bias, as some have urged.¹¹ We will argue that resistance to admitting such evidence can be vindicated by appealing to another fundamental legal value, equality before the law. This is a familiar legal value, but we believe its implications for evidence law have yet to be fully appreciated.

Equality before the law in the context of trial procedure tends to be understood as requiring only equal consideration of innocent defendants' interests in avoiding mistaken conviction.¹² In Section 3, we argue instead for a novel and more demanding interpretation of equality before the law that ascribes to innocent defendants a comparative right that we label a right to "equal protection."¹³ This is a right not to be

⁹ David Enoch, Talia Fisher, and Levi Spectre, "Statistical Evidence, Sensitivity, and the Legal Value of Knowledge," *Philosophy and Public Affairs* 40 (2012):197–224; David Enoch and Talia Fisher, "Sense and Sensitivity: Epistemic and Instrumental Approaches to Statistical Evidence," *Stanford Law Review* 67 (2015): 557–611.

¹⁰ See David T. Wasserman, "The Morality of Statistical Proof and the Risk of Mistaken Liability," *Cardozo Law Review* 13 (1991): 934–976; Amit Pundik, "Freedom and Generalisation," *Oxford Journal of Legal Studies* 37 (2016): 189–216.

¹¹ See Federico Picinali, "Base-rates of Negative Traits: Instructions for Use in Criminal Trials," *Journal of Applied Philosophy* 33 (2016): 69–87; Redmayne, "The Relevance of Bad Character."

¹² See Ronald Dworkin, "Principle, Policy, and Procedure," in *A Matter of Principle* (Oxford University Press, 1985), 89 and T.M. Scanlon, *Why Does Inequality Matter?* (Oxford: Oxford University Press, 2018), 11–25.

¹³ What we call the "right to equal protection" does not refer to the 14th Amendment guarantee of equal protection under the law. We take no position here on issues of constitutionality.

exposed to higher risks of mistaken conviction than other innocent defendants who are facing comparably serious charges.

We then go on, in Section 4, to show that admitting profile evidence will infringe this right to equal protection, because if incriminating profile evidence were admissible at trial, innocent defendants who fit an incriminating profile would be exposed to a higher risk of mistaken conviction than other innocent defendants. Admitting exculpatory profile evidence, such as evidence that a defendant is less likely to have committed a crime because the defendant grew up in, say, a *Good Environment*, will also infringe some defendants' rights to equal protection, although it will be the rights of defendants who do not fit exculpatory profiles rather than the rights of defendants who do. As we will see, however, there is a stronger overall case for overriding defendants' equal protection rights by admitting exculpatory profile evidence than there is for overriding those rights by admitting incriminating profile evidence.

In Sections 5 and 6, we turn to the implications of equal protection for the admissibility of other kinds of evidence. We will show that the argument we gave against the admissibility of profile evidence does not apply to eyewitness, trace, and motive evidence since they, unlike profile evidence, can mistakenly incriminate any defendant. Admitting these kinds of evidence might still give rise to unequal risks of mistaken incrimination across innocent defendants, in the sense that some categories of defendants will be more likely than others to have such evidence introduced against them at trial. But we argue, perhaps surprisingly, that this will not translate into unequal risks of mistaken *conviction* so long as fact-finders assess the probative value of the evidence correctly. A proper assessment of the probative value of profile evidence, by contrast, will guarantee unequal risks of mistaken conviction. Thus, profile evidence violates equal protection, not because fact-finders cannot be trusted to evaluate it properly, but because of the kind of evidence it is.

2 EXISTING APPROACHES

Our attempt to vindicate the intuitive resistance to admitting profile evidence, and our evaluation of competing approaches, will be guided by two desiderata. First, since the resistance is—we believe—motivated by the thought that admitting profile evidence would in some way wrong defendants, at least if they are innocent, we need to identify a reason against admitting such evidence that would entail that the defendants would be wronged by it. As we'll see below, not all reasons against admitting profile evidence would satisfy this desideratum. Secondly, what we seek is an objection to admitting profile evidence as such. There could be objections that are peculiar to particular forms of profile evidence. When the state uses racial or ethnic profiles, as in *Ethnicity*, this

could unavoidably express a false and demeaning message in a society where stereotypes that attribute innate criminality to these groups are prevalent.¹⁴ After someone who was convicted of a crime has paid their debt to society, it may be unjust to use their prior crime against them, as in *Prior Burglary*.¹⁵ But there is also resistance to profile evidence whatever its form. It is this broader resistance that we aim to vindicate.¹⁶

2.1 Earlier we mentioned two approaches that might be capable of identifying an objection to admitting profile evidence as such. One approach appeals to the legal value of deterrence, and shows how the admissibility of profile evidence could reduce the deterrence effect of punishment. Consider an agent deliberating about whether to commit a crime. What is distinctive about profile evidence is that, if the agent belongs to a profiled category, the corresponding profile evidence will be available against the agent whether or not they commit the crime. Thus, for people who fit profiles, the admissibility of profile evidence could reduce their incentive to abstain from the crime, because it would make their chances of being punished less dependent on whether or not they choose to commit the crime.¹⁷

¹⁴ See Deborah Hellman, "Racial Profiling and the Meaning of Racial Categories," in *Contemporary Debates in Applied Ethics* (2nd edition), ed. Andrew I. Cohen and Christopher H. Wellman (Hoboken, NJ: Wiley-Blackwell, 2014), 232-244. On the significance of the fact that when certain social groups are profiled, each instance of profiling can be expected to contribute to a larger pattern of similar actions, see Bolinger, "The Rational Impermissibility;" Adam Homar Hosein, "Racial Profiling and a Reasonable Sense of Inferior Political Status," *Journal of Political Philosophy* 26 (2018): 1-20 (2018); and Andreas Mogensen, "Racial Profiling and Cumulative Injustice," *Philosophy and Phenomenological Research* 98 (2019): 452-477. For a general discussion of how implicit racial biases generate legal and political injustices, see Michael Cholbi and Alex Madva, "Black Lives Matter and the Call for Death Penalty Abolition," *Ethics* 128 (2018): 517-544.

¹⁵ Anthony Duff and Sandra Marshall, "Character and Propensities: Some (Mis)uses of Statistics in Criminal Trials," *Unpublished Manuscript*, 9-11.

¹⁶ Our examples may seem to trade on the fact that defendants fitting those profiles already tend to suffer from discrimination, but the following example arouses the same intuitive resistance, even though the profile does not pick out a socially salient category of defendants:

Warrior Gene: Someone who carries the low activity allele of the MAOA gene is twice as likely to engage in violent, aggressive and antisocial behavior than someone who carries the high activity allele of the MAOA gene.

See Sally McSwiggan, Bernice Elger and Paul S. Appelbaum, "The Forensic Use of Behavioral Genetics in Criminal Proceedings: Case of the MAOA-L Genotype," *International Journal of Law and Psychiatry*, 50 (2017): 17-23)

¹⁷ See Enoch et al., "Statistical Evidence" and Enoch and Fisher, "Sense and Sensitivity." On the limits of the deterrence approach, see Georgi Gardiner, "Legal Burdens of Proof and Statistical Evidence," in *The Routledge Handbook of Applied Epistemology*, eds. David Coady and James Chase (New York: Routledge, 2018).

Although deterrence is obviously a legally relevant value, there are two reasons to doubt that this approach can vindicate the resistance to the admissibility of profile evidence. First, as the proponents of the deterrence approach themselves note, it is only when statistical evidence would be enough or nearly enough on its own for a conviction that its admissibility could compromise the deterrence effect of punishment. Even though evidence like *Ethnicity*, *Prior Burglary*, and *Bad Environment* can have considerable probative value, such evidence is not enough or nearly enough on its own to convict someone of a crime. Thus, even if it were admissible at trial, people belonging to these profiles would still have a strong incentive to abstain from crime, since whether there would be enough evidence *overall* to convict them would still depend heavily on whether they commit the crime or not.¹⁸

The second issue with the deterrence approach is that it does not even attempt to explain how admitting profile evidence could wrong defendants. Even if admitting profile evidence against defendants would compromise deterrence, these defendants would have no special standing to complain. The state may have a duty to preserve the deterrence value of punishment, but this is owed to the general public, not to defendants in particular.

2.2 There is another approach to profile evidence that, unlike the deterrence approach, does attempt to explain how its admission would wrong defendants. According to this other approach, admitting profile evidence is inconsistent with the legal commitment to respect the autonomy or individuality of defendants.¹⁹ The literature has largely been dismissive of this approach, on the grounds that there is no incompatibility between relying on profile evidence to infer what a defendant has done and viewing the defendant as having done it autonomously.²⁰ But there is another way of understanding this approach that cannot be so easily dismissed, namely, that in relying on profile evidence, the fact-finders treat the defendant merely as a member of a group and not as an individual.

If profile evidence is admitted at trial, the fact-finders may reach a decision to convict based in part on a generalization about the group the defendant belongs to. Even if they do not ultimately convict, profile evidence still invites them to infer, on the

¹⁸ Enoch and Fisher in "Sense and Sensitivity" also note that the admissibility of prior act evidence like *Prior Burglary* will not dampen incentives to avoid crime if we take into account the period before the first crime is committed.

¹⁹ Wasserman, "The Morality of Statistical Proof" and Pundik, "Freedom and Generalisation."

²⁰ For criticisms, see Picinali, "Base-rates," 73–75, and Mike Redmayne, "Exploring the Proof Paradoxes," *Legal Theory* 14 (2008): 292-296.

basis of the defendant's group membership, that the defendant is more likely to have a propensity to commit a type of crime, or at least a stronger propensity than others who do not belong to the defendant's group. Since these inferences are based on generalizations, they could treat the defendant merely as a member of a group and not as an individual.

But treating someone as an individual does not, on the most plausible interpretation, require eschewing reliance on (accurate) generalizations. Rather, it only requires being receptive to the possibility that the individual is an exception to the generalization—that is, being receptive to any finer-grained information that would indicate the generalization is not to be relied upon in drawing a conclusion about the individual.²¹ A job applicant who was rejected because of a criminal history could complain of not being treated as an individual if the employer had ignored information about the applicant's long record of trustworthiness since the crime or had denied the applicant an opportunity to present this information. But a defendant in a trial is given an opportunity to introduce evidence that distinguishes them from their group and is entitled to have this information taken into consideration by the fact-finders. In a well-functioning courtroom, then, fact-finders could use profile evidence without failing to treat the defendant as an individual.²²

3 EQUAL PROTECTION

Neither the deterrence approach nor the autonomy approach seems able to fully capture our resistance to the admissibility of profile evidence. We now turn to our own proposal. We will present an argument for what we call a "right to equal protection" — that is, a comparative right belonging to innocent defendants not to be exposed to higher risks of mistaken conviction than other innocent defendants facing comparably serious charges. Our strategy will be to first describe a non-comparative right not to be exposed to an excessive risk of mistaken conviction, which we call a "right to due protection."

²¹ We think this is the most plausible way of understanding Wasserman's objection in "The Morality of Statistical Proof." For accounts of what it is to treat someone as an individual, see Kasper Lippert-Rasmussen, "We Are All Different: Statistical Discrimination and the Right to Be Treated as an Individual," *Journal of Ethics* 15 (2011): 47–59 and Benjamin Eidelson, "Treating People as Individuals," in *Philosophical Foundations of Discrimination Law*, ed. Deborah Hellman and Sophie Moreau (Oxford: Oxford University Press, 2013), 203–227.

²² When the defendant identifies with their group, as they might in the case of *Ethnicity*, they may be understandably reluctant to attempt to distinguish themselves from their group, even when they could. To avoid forcing defendants to choose between distancing themselves from a group they identify with and defending themselves as effectively as possible, perhaps *Ethnicity* and other forms of profile evidence where defendants are likely to identify with their group should not be admissible. But this reasoning would not extend to other examples of profile evidence like *Bad Environment* and *Prior Burglary*.

Then we will identify an intuitive, fairness-based complaint that cannot be explained by this non-comparative right and that can only be explained by ascribing to innocent defendants a comparative right to equal protection. Equal protection, then, is our interpretation of what equality before the law demands in the context of criminal trials. As we will see in the next section, it is this comparative right to equal protection that would be infringed by rules of evidence that allow profile evidence to be introduced at trial.

3.1 Criminal trials aim at accurate verdicts, that is, at convicting the guilty and only the guilty. Trials are fallible, however, and inevitably some defendants will be mistakenly convicted of a crime they did not commit. This does not mean that the trial system cannot be justified to innocent defendants. While innocent defendants cannot demand not to be exposed to any risk of mistaken conviction at all, they do have certain rights against these risks.²³ We will understand the risks of mistaken conviction from the *ex ante* perspective of lawmakers who design the trial system (more on this later). From this perspective, the risks of mistaken conviction are a function of the procedural protections that are provided to defendants, such as the standard of proof, the voting rule for juries, and the rules of evidence.²⁴

Innocent defendants clearly have a right against being exposed to an excessive or undue risk of mistaken conviction, but what counts as an excessive risk? Unless we are prepared to reduce the risk to zero by abolishing prosecution, we must concede that a risk greater than zero is not excessive if it would be too costly to reduce it further. To decide whether a risk-reducing protection is too costly, we need to balance its costs—which can be direct, such as the costs of providing legal representation to indigent defendants, or indirect, such as the costs of increased crime—against the importance of avoiding mistaken convictions.²⁵ We accept the standard view that, on any given charge, avoiding mistaken convictions is not only very important but also relatively more

²³ The risk of mistaken conviction for innocent defendants is the conditional probability $\Pr(C/I)$ that if a defendant is factually innocent (abbreviated I), the defendant is convicted (abbreviated C).

²⁴ For the view that procedural rights are derivative substantive rights against risks, see Larry Alexander, "Are Procedural Rights Derivative Substantive Rights?" *Law and Philosophy* 17 (1998): 19–42.

²⁵ Many procedures that reduce the risk of mistaken convictions also increase the risk of mistaken acquittals. Retributivist theories would conceive of the indirect costs associated with mistaken acquittals differently, for example, as guilty defendants failing to receive the censure they deserve.

important than avoiding mistaken acquittals.²⁶ Innocent defendants, then, have a right against being exposed to a level of risk whose further reduction would be cost-justified, in light of the special importance of avoiding mistaken convictions. We call this the “right to due protection.”

Since both of the factors that must be balanced in determining due protection — that is, the importance of avoiding mistaken convictions and the costs of protection — can vary across categories of defendants, the right to due protection is compatible with two types of inequalities in the risks of mistaken conviction. First, it might be more important to avoid mistaken convictions for some defendants than others, depending on the gravity of the charges against them. For example, avoiding mistaken convictions for murder may be more important than avoiding mistaken convictions for petty theft, since the condemnation and punishment associated with murder convictions are much worse. Insofar as due protection is sensitive to the importance of avoiding mistaken convictions, what would count as an excessive risk of mistaken conviction for defendants facing murder charges might not count as an excessive risk for defendants facing charges of petty theft. Due protection would therefore permit the latter defendants to be exposed to a higher risk of mistaken conviction than the former.²⁷

Secondly, among defendants charged with comparably serious crimes, there can be predictable differences in the costs, whether direct or indirect, of achieving a given level of protection. In terms of direct costs, it may be more expensive to protect poor defendants who do not speak English than poor defendants who do speak English, because they may need to be provided with a translator as well as a public defender in order to enjoy a similar level of protection.²⁸ In terms of indirect costs, since some groups of defendants have higher recidivism rates than others, mistaken acquittals of defendants from such groups could lead to more crime than mistaken acquittals of defendants who do not belong to any of these groups. Since due protection is sensitive to costs, it would allow defendants whose protection is more costly to be exposed to higher risks of mistaken conviction than defendants whose protection is less costly, even when they are facing the same charges.

²⁶ On this, see Adam Homar Hosein, “Doing, Allowing, and the State,” *Law and Philosophy* 33 (2014): 239-40; Ronald Dworkin, “Principle, Policy, and Procedure;” Antony Duff, *Trials and Punishments* (Cambridge: Cambridge University Press, 1986).

²⁷ Due protection would permit this inequality only on the assumption that the costs of mistaken acquittals on these different charges were roughly the same, as they could be if, say, the recidivism rate for property crimes is much higher than for murder.

²⁸ See the *amicus* brief by the ACLU in the case *Annie Ling v. Georgia*, case n. S10-C0460 (2010).

3.2 In order to determine whether defendants have, in addition to the right to due protection, a comparative right against risks, we need to consider whether either of the two inequalities described above is objectionable. We do not think an inequality in risks of mistaken conviction that merely reflects differences in the importance of avoiding mistaken convictions would be unfair to the defendants charged with minor crimes. If trial procedures were to be adjusted by setting the standard of proof lower for, say, minor than for major charges, those accused of minor crimes would be subject to higher risks compared to those accused of major crimes, but they would not necessarily be disadvantaged since a mistaken conviction may also be less bad for them.²⁹

By contrast, inequalities that reflect differences in the costs of protection do strike us as objectionable. To make this apparent, we will focus on the example about variation in indirect costs of protection due to defendants' different recidivism rates. There are a number of factors associated with higher recidivism, such as age, gender, neighborhood, employment, and level of education. Mistaken acquittals of guilty defendants without a college education, for example, would lead to more crime than mistaken acquittals of guilty college-educated defendants.³⁰ Since the cost of mistakenly acquitting defendants without a college education is then predictably greater than mistakenly acquitting defendants with a college education, due protection would, in principle, permit a lower standard of proof for defendants without a college education than for college-educated defendants, even when they are charged with comparably serious crimes.³¹ The lower standard of proof would genuinely disadvantage innocent defendants without a college education, and intuitively, they would have grounds for complaint. Exposing one category of innocent defendants to higher risks of mistaken conviction than others simply because they are more costly to protect seems unfair.

We should make clear that this intuition is about their exposure to higher risks, and not just a reflection of a prior belief that the standard of proof should for some other

²⁹ In actual practice the standard of proof is fixed, but some commentators have recommended a higher standard of proof for major than for minor charges; see H. L. Ho, *A Philosophy of Evidence Law* (Oxford: Oxford University Press, 2008), 173–229.

³⁰ See Lance Lochner and Enrico Moretti, "The Effect of Education on Crime: Evidence from Prison, Inmates, Arrests, and Self-Reports," *American Economic Review* 94 (2004):155–189.

³¹ Due protection permits, but does not require this inequality. The state could equalize risks without violating due protection by giving defendants without a college education more protection than they are due.

reason be fixed.³² Even if the standard of proof were fixed across defendants while the risks of mistaken conviction were adjusted in other ways, such as by assigning six jurors to defendants without a college education and twelve jurors to college-educated defendants or by varying the jury voting rule from majority to unanimity, defendants without a college education could still voice the same complaint.³³ Since the complaint of defendants without a college education would seem to depend essentially on the fact that college-educated defendants facing the same charges were treated more favorably, the explanation we favor is that innocent defendants possess a certain comparative right against risks. Specifically, we maintain that equality before the law, or comparative fairness, demands what we have labeled “equal protection”: that innocent defendants not be exposed to higher risks of mistaken conviction than other innocent defendants facing the same charges or comparably serious charges.

This right to equal protection, as we have defined it, differs in an important way from another comparative right that is often cited in connection with criminal procedure, namely, a right to equal consideration. This other right is infringed when a distribution of risks cannot be defended except on the prohibited assumption that some defendants' interests in avoiding mistaken conviction are less worthy of consideration than other defendants' comparable interests.³⁴ We agree that defendants possess a comparative right to equal consideration in this sense, but this right cannot explain the complaint of the defendants without a college education. The choice to impose higher risks of mistaken conviction on defendants without a college education need not reflect a view that their interests in avoiding mistaken convictions are less worthy of concern than the interests of college-educated defendants facing similarly serious charges, but only a difference in the costs of providing the same level of protection. Thus, in order to

³² Some argue that fact-finders should deliver a guilty verdict only if they fully believe or know that the defendant is guilty, no matter the gravity of the charge, and that a variable standard of proof would conflict with this requirement; see Antony Duff, Lindsay Farmer, Sandra Marshall and Victor Tadros, *The Trial on Trial: Volume 3* (London: Hart Publishing, 2007), 89–90. Even if Duff et al. are correct about this, this concern would not extend to altering the number of jurors or the voting rule, since these measures are consistent with every fact-finder voting guilty only if they fully believe in the defendant's guilt.

³³ Their complaint cannot be about the mere fact that they are being tried under different procedures either. For suppose lawmakers knew that six jurors operating under a unanimity voting rule were just as likely, in relation to any given body of evidence, to return a guilty verdict as twelve jurors operating under a majority voting rule. If these different procedures delivered exactly the same degree of protection and there was no insulting motivation behind the choice of different procedures, defendants tried under these different procedures could have no objection.

³⁴ For versions of what we're labeling a comparative right to “equal consideration,” see Ronald Dworkin, “Principle, Policy, and Procedure,” 89, and T.M. Scanlon, *Why Does Inequality Matter?*, 11–25. Due protection and equal consideration are distinct. If some groups are given more protection than is worth the costs, while others are given exactly the level of protection that is worth the costs, this would violate equal consideration but not due protection.

explain why defendants without a college education would have the complaint they do, we need to appeal to a comparative right to equal protection.³⁵

3.3 Equal protection is our interpretation of what equality before the law, or comparative fairness, demands in the context of the criminal trial. In the next section, we will explain why the admissibility of profile evidence would infringe the right to equal protection. Before we turn to that discussion, a few final clarifications are in order.

First, the conception of risk that is deployed in the content of the right to equal protection is neither purely subjective nor purely objective, but rather epistemic in the sense that it should be assessed from the evidence-relative perspective of a reasonable person. As others have argued, an epistemic conception of risk is the most suitable conception for the morality of risk imposition in general.³⁶ And in our view, such a conception is also especially apt for interpreting equal protection, since equality before the law demands impartiality, and only securing equal epistemic risks of mistaken conviction would adequately express the state's commitment to impartiality.³⁷

Second, since the right to equal protection is supposed to guide the design of criminal procedure and evidence law, the risks of mistaken conviction should be assessed in light of the information available to reasonable lawmakers, such as legislators and appellate court judges who set legal precedent. This information will inevitably be limited. As they design criminal procedure and evidence law, lawmakers

³⁵ Since some defendants lacking a college education will also possess characteristics that are known to reduce the risk of recidivism, such as being older or being female, they might complain that lawmakers have failed to treat them as individuals. But suppose that all the characteristics of each defendant were entered into the best available algorithm to predict the chances of recidivism if guilty, and on that basis each defendant was assigned either six or twelve jurors. It would still be the case that defendants without a college education would be at higher risk of mistaken conviction than college-educated defendants, since they would be at higher risk of being assigned six jurors by the algorithm. And they would still, in our view, have a complaint against these higher risks, even though they could not say the system failed to treat them as individuals, since by hypothesis the algorithm did not neglect any of the available finer-grained evidence bearing on their risk of recidivism.

³⁶ See John Oberdiek, *Imposing Risk: A Normative Framework* (Oxford: Oxford University Press, 2017). This epistemic or "evidence-relative" conception of risk is neither fact-relative (purely objective), which would require lawmakers to act on whatever the correct beliefs about the objective probabilities would be, nor belief-relative (purely subjective), which would only require lawmakers to act on whatever degrees of belief they happened to have.

³⁷ If the epistemic risks from the perspective of lawmakers were unequal, they could not claim to be impartial even though, unbeknownst to them, the objective risks were equal. The same is true if the epistemic risks were unequal, yet the subjective risks were equal only because the lawmakers had buried their heads in the sand. The lawmakers could, however, claim to be impartial if the epistemic risks were equal even though the trial process was deterministic and every defendant was either objectively certain to be convicted or acquitted. See David Wasserman, "Let Them Eat Chances: Probability and Distributive Justice," *Economics and Philosophy* 12 (1996): 29–49, for an argument along similar lines that the fairness of lotteries depends on the way they distribute epistemic rather than objective chances.

cannot predict the identities of future defendants in criminal trials or the circumstances of particular future crimes. What they can know, from their *ex ante* point of view, are the following: that some of the defendants will be or could be innocent; what types of defendants there are or might be (so long as those types are specifiable without reference to the circumstances of particular crimes);³⁸ what kinds of evidence there could be; and other general facts, such as what prosecutors and defense attorneys are likely to do in response to the rules of evidence and how fact-finders would respond to bodies of evidence. For equal protection to guide lawmakers' decisions about the rules of trial procedure, then, the risks to innocent defendants must be assessed from lawmakers' incompletely informed *ex ante* perspective.³⁹

The third clarification is that equal protection, as we have defined it, is a right that innocent people possess as defendants. It could be in the interests of some categories of innocent citizens that they be exposed to higher risks of mistaken conviction, should they ever become defendants. For example, setting a lower standard of proof for defendants without a college education would expose innocent defendants in that category to a higher risk of mistaken conviction, but it would also lower the risk that guilty defendants without a college education would get away with their crimes. If the main victims of guilty people without a college education were innocent people without a college education, this could work out to the net benefit of innocent people without a college education. Perhaps higher risks of mistaken conviction could be justified in this way to innocent citizens without a college education, who might become but are not currently defendants. But the criminal trial is a distinct stage in the criminal justice process, and equality before the law asserts itself at each stage.⁴⁰ This means that

³⁸ Knowing that there are or could be defendants belonging to a certain ethnicity, having a certain socio-economic status or criminal record is possible without knowing the details of any particular crime or the identities of any particular defendant.

³⁹ Even when the risks are equal from the *ex ante* point of view of lawmakers, there will inevitably be downstream inequalities in outcomes: some innocent defendants will be convicted and other innocent (and guilty) defendants will be acquitted. There will also inevitably be more incriminating evidence against some innocent defendants than others. But notice that there is no way for lawmakers (or anyone else) to redress these downstream inequalities without knowing the identities of the innocents, short of abandoning prosecution entirely. By contrast, it is possible to redress inequalities in the *ex ante* risks of mistaken conviction across categories of innocent defendants by adjusting criminal trial procedure. It is enough to know that there are or could be innocent defendants in each category. Since the procedures apply to everyone, lawmakers can know whether there is an inequality in the *ex ante* risk of mistaken conviction and how to correct it without knowing who the innocent defendants are.

⁴⁰ *Ex ante* contractualists may need to require justifiability to a person *at each time* to avoid endorsing multi-stage schemes that are in everyone's *ex ante* interest in the first stage but severely burden a few in the second stage, e.g., a lottery that selects 10 patients from 100 on which to perform deadly experiments in order to save the other 90. See Johann Frick's 'Decomposition Test,' defended in "Contractualism and Social Risk," *Philosophy & Public Affairs*, 43 (2015): 201–212. We think the same point has application to the stages of the criminal justice system.

the higher risks of mistaken conviction must also be justified to those citizens who have now become innocent defendants, and this cannot be done, because while those higher risks may have been in their interests as citizens, they are no longer in their interests as defendants.⁴¹ Thus, unequal risks of mistaken conviction, whether brought about by a lower standard of proof, fewer jurors, or as we will see in the next section, the admissibility of profile evidence, remain unfair to those innocent defendants who are at a higher risk, even if these measures were in their interests as assessed from an earlier stage in the criminal justice process.

Finally, it is only innocent defendants who possess the right to equal protection, as we have defined it. Guilty defendants, whoever they are, are at no risk of *mistaken* conviction, so they are not covered by equal protection. Of course, since lawmakers do not know who is innocent and who is guilty, they cannot respect the rights of innocent defendants without extending the same protections to all defendants, innocent and guilty. But are guilty defendants also entitled to something analogous to equal protection? Since guilty defendants have no grounds for complaint if the trial system exposes them to a higher risk of conviction than innocent defendants, as any reliable trial system would, equality before the law cannot require that everyone, guilty and innocent alike, be exposed to equal risks of conviction. But perhaps guilty defendants have a right not to be exposed to higher risks of *correct* conviction than other guilty defendants facing comparable charges. We have less confidence that guilty defendants possess a right to equal chances of avoiding conviction for a crime they did commit than that innocent defendants have a right to equal protection, and we also have less confidence that guilty defendants would be wronged by the use of profile evidence.⁴² This is why we concentrate on innocent defendants. However, the objection to profile evidence on behalf of innocent defendants that we develop below could easily be extended to guilty defendants by ascribing them a right to equal risks of correct conviction.

⁴¹ A consideration that might, by contrast, be capable of justifying a higher risk of mistaken conviction to a group of defendants *qua* defendants would be that exposing them to a higher risk (comparatively speaking) is necessary to lower their absolute risk of mistaken conviction. But such a defense is not available for admitting profile evidence at trial.

⁴² This is not because we doubt that guilty defendants could have any procedural rights at all. But see Christopher H. Wellman, *Rights, Forfeiture, and Punishment* (Oxford: Oxford University Press, 2017), 91–119 for the view that guilty defendants have no procedural rights, and see David Enoch, “In Defense of Procedural Rights (Or Anyway, Procedural Duties): A Response to Wellman,” *Legal Theory* 24 (2018): 40–49, for a rejoinder.

4 AGAINST ADMITTING PROFILE EVIDENCE

Having defended the right to equal protection, we will now explain why admitting profile evidence would conflict with it. Since it is legislators and appellate courts setting precedents that decide evidence law, our objection is addressed to these lawmakers. We will begin by offering an argument against admitting incriminating profile evidence and then turn to exculpatory profile evidence.

4.1 As a starting point, imagine a trial system whose rules forbade profile evidence from being admitted during trial proceedings. If the system were changed so that profile evidence became admissible, what would be the consequences for defendants? By making incriminating profile evidence admissible, the trial system would allow prosecutors to present an additional form of evidence that was probative of guilt. For example, it would allow prosecutors to present the profile evidence in *Bad Environment* that expresses a positive correlation between fitting profile BE—that is, being male, addicted to drugs, unemployed and having grown up in a broken home—and committing a violent crime. Presenting this evidence at trial would increase, sometimes significantly, the probability of guilt of defendants who fit profile BE.⁴³

Assuming that prosecutors would take advantage of opportunities to present evidence of guilt, making profile evidence admissible would mean that *Bad Environment* evidence would now be presented against defendants who match the relevant profile and have been charged with a violent crime.⁴⁴ By contrast, the chances that prosecutors would present the same profile evidence against defendants who are charged with the same crime but who do *not* fit profile BE would be zero, since this profile evidence could not be probative of these defendants' guilt.

The difference just identified between defendants who fit profile BE and defendants who do not fit this profile can be known *ex ante*, in advance of any particular trial or criminal investigation. Without knowing the circumstances of any particular violent crimes, lawmakers can still know that if an individual who matches profile BE were to become a defendant charged with a violent crime, this defendant would be at a higher risk of incrimination by *Bad Environment* profile evidence than would a defendant who does not match profile BE. This difference in the risk of incrimination would apply broadly to all defendants, and thus also to *innocent* defendants. Making profile evidence such as *Bad Environment* admissible across trials would therefore increase the *ex ante* risk

⁴³ See footnote 7.

⁴⁴ If the evidence is admissible, the probability that the prosecutor presents the evidence at trial is a function of three probabilities: (i) the probability that the evidence exists; (ii) the probability that if it exists, it is discovered; and (iii) the probability that if it is discovered, the prosecutor presents it at trial.

that an additional kind of incriminating evidence would be presented against innocent defendants, but only against the innocents who fit profiles such as BE.

Now suppose that fact-finders' decisions to convict are *rationaly calibrated* with the probative value of the overall body of evidence presented at trial. When the fact-finders are rationally calibrated with the body of evidence, the more probative of guilt the body of evidence is, the more likely the defendant will be convicted, while the less strongly probative of guilt the body of evidence is, the less likely the defendant will be convicted. This has important consequences for the distribution of the *ex ante* risks of mistaken conviction. Since admitting evidence that shows a positive correlation between fitting profile BE and committing a violent crime would make the overall body of evidence more probative of guilt, this admission should, by calibration, increase the risk of mistaken conviction for the innocents who fit profile BE. However, it would not increase the risk of mistaken conviction for innocents who do not fit this profile. And the more *Bad Environment* evidence adds to the probative value of the overall body of evidence, the more its admission should, again by calibration, increase the risk of mistaken conviction for the innocent defendants who fit profile BE.

This conclusion does not only apply to defendants who fit profile BE, but it applies as well to any defendant who fits a profile that is positively correlated with committing a violent crime. Any such defendant would be subject to an increased risk of mistaken conviction for violent crimes. But, crucially, this increased risk would also be limited to those defendants. Innocent defendants charged with violent crimes who were fortunate enough to not fit any profile that was positively correlated with committing a violent crime would be immune to incrimination by profile evidence.

The same argument we gave for profiles correlated with violent crimes can also be applied to profiles correlated with other types of crimes, such as *Ethnicity* and drug smuggling, *Prior Burglary* and burglary, and so on. The profiles in question may pick out features that structure interactions across a wide range of social contexts, such as ethnicity, gender, age, and class. But they might also pick out features that are not socially salient at all, such as genetic characteristics.⁴⁵ All that is required for the argument to apply is that it be possible for lawmakers to distinguish, in advance of particular trials, between those who fall under a profile positively correlated with a type of crime and those who do not.

4.2 We can now see why admitting incriminating profile evidence at trial would conflict with defendants' right to equal protection. We have seen that the admission of profile evidence would increase the *ex ante* risk of mistaken conviction for all and only innocent

⁴⁵ See, e.g., *Warrior Gene* in footnote 16.

defendants who match a relevant incriminating profile. This increase in risk would, in turn, expose them to a higher risk of mistaken conviction than other innocent defendants, other things equal.⁴⁶ The profiled defendants burdened by a higher risk of mistaken conviction, then, would have an equal protection-based complaint against a trial system that admitted incriminating profile evidence.⁴⁷ This is our objection to admitting incriminating profile evidence at trial.⁴⁸

The complaint against admitting incriminating profile evidence cannot be justified by appealing to either of the other rights we discussed in Section 3. It cannot be justified by invoking the non-comparative right to due protection because there is no reason to think that admitting incriminating profile evidence would expose innocent defendants to an excessive risk of mistaken conviction. Nor can the complaint be justified by invoking the comparative right to equal consideration. Equal consideration, unlike equal protection, is compatible with unequal risks when these different risks

⁴⁶ If innocent defendants who fit a certain profile antecedently enjoy a lower risk of mistaken conviction, the increase in risk brought about by admitting profile evidence might reduce, not create, an inequality. But there is no reason to think that admitting profile evidence would systematically redress imbalances in the prior distribution of risks. In fact, since many forms of profile evidence target categories of defendants who may already be at a disadvantage, in terms of access to quality legal representation, admitting profile evidence would if anything tend to exacerbate antecedent inequalities in the risks of mistaken conviction rather than reduce them.

⁴⁷ The right to equal protection is a right not to be exposed to a higher risk of mistaken conviction than other innocent defendants on trial for comparably serious crimes — that is, on trial for the same crime or a different but comparably serious crime. Note that it is possible for a type of defendant to be at a higher risk for the same or a comparably serious crime without being at a higher risk in relation to a class of comparably serious crimes. Suppose that A's are more likely to commit car theft and B's are more likely to commit motorcycle theft. If profile evidence is admissible, neither A's nor B's will be at higher risk of mistaken conviction in relation to the class of comparably serious crimes consisting of car theft and motorcycle theft. But A's on trial for car theft would have an equal protection complaint, since A's would be at higher risk of mistaken conviction for car theft than B's, and B's on trial for motorcycle theft would have an equal protection complaint, since B's would be at higher risk of mistaken conviction for motorcycle theft than A's. We thank one of the associate editors of this journal for the example.

⁴⁸ Our objection applies to all profile evidence, even when the profile is a matter of choice. This might be challenged. An associate editor suggested that the right to equal protection should be responsibility-sensitive, in the sense that exposing a class of defendants to higher risks of mistaken conviction would be acceptable so long as these defendants had a fair opportunity to avoid those higher risks. The rules of evidence could then admit profile evidence involving profiles that defendants would match only because of earlier choices they had made. We do not have an argument against choice-sensitivity in the context of trial procedure, but we think that recognizing innocent defendants' equal status requires abstracting away from most and perhaps all differences due to choices. Even if all innocent defendants who fit crime-correlated descriptions like "lacks a college education," "is unemployed," or "is unmarried," had what could be considered a fair opportunity to avoid falling under those descriptions, this would not license exposing these defendants to a higher risk of mistaken conviction than innocent defendants who had made different choices in life. Even defendants' earlier illegal choices, as in *Prior Burglary*, would not warrant exposure to higher risks after they have paid their debt to society. We concede, however, that choice-sensitivity may have more plausibility in relation to certain choices, such as a choice to associate with members of a criminal organization. For an example of a principle of fairness that is, unlike our principle of equal protection, thoroughly responsibility-sensitive, see Mogensen, "Racial Profiling."

reflect differences in the costs of protection. Since equalizing these risks by excluding profile evidence would come at a cost in terms of mistaken acquittals of the profiled defendants, a choice to leave the inequality intact need not imply that the interests of the disadvantaged defendants in avoiding mistaken convictions have been given less weight.⁴⁹

4.3 So far we have only discussed profile evidence in its incriminating form, but profile evidence can also take an exculpatory form. For example, a defendant who attended college might seek to present as exculpatory evidence the fact that attending college is negatively correlated with committing the type of crime they have been accused of. Should profile evidence in its exculpatory form be inadmissible as well? The law does look more favorably on admitting at least certain kinds of exculpatory profile evidence, such as good character evidence.⁵⁰ And we suspect there may be less intuitive resistance to admitting profile evidence that would exculpate rather than incriminate defendants. After all, since the admissibility of exculpatory profile evidence could only help innocent defendants, not hurt them, who could object? As we will explain below, however, there are defendants who could have legitimate objections to the admissibility of exculpatory profile evidence.

Notice first that, even if incriminating profile evidence were inadmissible, the admissibility of exculpatory profile evidence could still increase the risk of mistaken conviction for defendants who fit incriminating profiles in the following way. If exculpatory profile evidence were admissible, fact-finders might infer from the fact that it was not presented by the defense that the defendant must fall under an incriminating profile. For example, if it were customary for the defense to announce that a defendant had no criminal record whenever a defendant had no criminal record, fact-finders could infer from the absence of such an announcement in a particular case that the defendant in this case must have a criminal record.⁵¹ Thus, admitting exculpatory profile evidence

⁴⁹ As a referee has pointed out, if lawmakers knew that there would be only one trial and knew the identity of the only defendant, then a decision to admit profile evidence against that defendant would not be vulnerable to our objection. If using profile evidence against that defendant still seems objectionable, our account cannot capture that objection. But if there were a second trial, and the lawmakers decided to admit profile evidence, knowing that it could only be used against the first and not the second defendant, the first defendant would surely have a stronger complaint, and our account can capture that.

⁵⁰ See, e.g., Federal Rules of Evidence 404(a)(1).

⁵¹ An anonymous reviewer made this point. For further discussion, see Larry Laudan and Ronald J. Allen, "The Devastating Impact of Prior Crimes Evidence and Other Myths of the Criminal Justice Process," *The Journal of Criminal Law and Criminology* 101 (2013): 493–528.

could have the same effect on defendants who fit incriminating profiles that admitting incriminating profile evidence would.

But suppose that we could prevent this effect by instructing fact-finders not to draw any adverse inferences from the fact that no exculpatory profile evidence was presented on behalf of a defendant, just as they are instructed not to draw adverse inferences from the fact that a defendant chose not to testify. If these instructions were effective, then admitting exculpatory profile evidence would not increase the risk of mistaken conviction for defendants who fit incriminating profiles, and it would only reduce the risk for defendants who fit exculpatory profiles. Who, then, could be wronged? Obviously defendants who fit exculpatory profiles, such as defendants who have graduated from college, would have no complaint. But if we take up the perspective of defendants who are just as innocent, but cannot avail themselves of this exculpatory evidence because they are not college graduates, we can begin to see how the admissibility of exculpatory evidence could be unfair to them. Our account can capture their complaint, since the right to equal protection is a right not to be exposed to a higher risk of mistaken conviction than other innocent defendants, and innocent defendants can be exposed to a higher risk either because their risk was increased or because the risk to other defendants was lowered.

Still, incriminating and exculpatory profile evidence are not entirely on a par. Banning incriminating profile evidence would realize equal protection by enhancing or “leveling up” the level of protection (i.e., reducing the level of risk) for some, namely defendants who match incriminating profiles. By contrast, banning exculpatory profile evidence would realize equal protection by reducing or “leveling down” the level of protection (i.e., increasing the level of risk) for some, namely defendants who match exculpatory profiles. That equal protection may demand leveling down as well as leveling up just follows from the fact that it is a genuinely comparative right. But rights like equal protection can be overridden, and there is reason to think that the case for admitting exculpatory profile evidence may be strong enough to override equal protection's demand that this evidence be excluded.

The case for admitting exculpatory profile evidence might, for example, appeal to the right to due protection, which calls for measures that reduce the risk of mistaken conviction, so long as they are cost-justified. Admitting exculpatory profile evidence is a measure that would reduce the risk of mistaken conviction for defendants who fit exculpatory profiles, and although admitting this evidence would result in mistaken acquittals, there is no reason to think it would result in more mistaken acquittals than

would other forms of exculpatory evidence that are routinely admitted at trial.⁵² If due protection does demand admitting exculpatory profile evidence, then there would be a conflict between the due protection rights of those who fit exculpatory profiles and the equal protection rights of those who do not. Arguably the due protection rights should prevail and exculpatory profile evidence ought to be admitted, all-things-considered, even though this would be unfair to some defendants.⁵³ There could not, by contrast, be a conflict between due protection and equal protection in the case of incriminating profile evidence, since no one's due protection rights could demand that incriminating profile evidence be admitted.

We have seen that admitting incriminating profile evidence would create an inequality in the distribution of the risks of mistaken conviction, and that admitting exculpatory profile evidence would do so as well. But what would be the overall effect on the risks of mistaken conviction of admitting both forms of profile evidence? Defendants who are accused of a crime may fit some profiles that are incriminating and some profiles that are exculpatory. Conceivably, there could be a defendant for whom every incriminating profile that they fit is exactly canceled out by another exculpatory profile that they also fit. But for almost all defendants, taking into account both incriminating and exculpatory profile evidence would make a defendant's guilt, on balance, either more probable or less probable than it would be without that evidence.⁵⁴ By calibration, then, admitting both forms of profile evidence should increase the risk of mistaken conviction for some innocent defendants and decrease it for others, thereby creating inequalities in the risks of mistaken conviction across innocent defendants.

5 IS PROFILE EVIDENCE UNIQUE?

Our argument against admitting incriminating profile evidence rests on a simple idea. From their *ex ante* perspective, lawmakers can predict that some defendants, including

⁵² If Enoch and Fisher are right that admitting profile evidence would also compromise deterrence to some extent, then admitting exculpatory profile evidence could be more costly than admitting other forms of exculpatory evidence, and it is at least possible that due protection could require admitting other forms of exculpatory evidence, but not profile evidence.

⁵³ If we treat the demands of equality here as contingent on the availability of measures that would not infringe anyone else's non-comparative rights, as some egalitarians have recommended in other contexts—see Matthew Clayton, "Equality, Justice and Legitimacy in Selection," *Journal of Moral Philosophy* 9 (2012): 8–30—equal protection may not even demand banning exculpatory profile evidence. Due protection is one candidate non-comparative right. A basic liberty belonging to innocent defendants to mount a defense to the best of their ability is another.

⁵⁴ Assuming incriminating features tend to cluster together, if someone were to fit one incriminating profile such as *Bad Environment*, that would make it more likely that they fit other incriminating profiles and less likely that they fit exculpatory profiles.

innocent ones, will be incriminated by profile evidence because they fit an incriminating profile. The lawmakers can also predict that other defendants will not be incriminated by profile evidence because they do not fit an incriminating profile. As a consequence of admitting profile evidence, then, those defendants who fit incriminating profiles will be exposed to a higher risk of mistaken conviction than other defendants, thus violating their rights to equal protection.⁵⁵

But is profile evidence unique in this respect, or do other kinds of evidence that are routinely admitted at trial, such as eyewitness testimony, trace evidence, and motive evidence also violate equal protection? There is a critical difference between profile evidence and other kinds of evidence, namely, lawmakers can know in advance of particular trials who can and who cannot be incriminated by profile evidence, but they cannot know who can and who cannot be incriminated by eyewitness testimony, trace evidence or motive evidence. This critical difference will be key to understanding why admitting profile evidence at trial would yield unequal risks of mistaken conviction, while admitting these other kinds of evidence would not.

5.1 We begin with eyewitness testimony evidence, which is probative of a defendant's guilt when the defendant fits the physical description of the perpetrator that has been provided by an eyewitness. This is a fallible form of evidence, in the sense that an innocent defendant could be mistakenly incriminated by it. But there is no way for lawmakers to know in advance of particular trials what, if any, physical descriptions of the culprit would be given by eyewitnesses. Since any physical description could be incriminating if it is provided by an eyewitness to the crime the defendant is accused of, there is no innocent defendant who is immune to mistaken incrimination by this form of evidence.

The same can be said of trace evidence. When physical traces are found at a crime scene, they will be analyzed for certain characteristics that are statistically uncommon, such as genetic profiles or fingerprint patterns. If the defendant matches the traces — that is, if the defendant and the traces share the relevant characteristic — the match will be incriminating. Trace evidence, like eyewitness testimony, is fallible. An analyst might have made a mistake, or the perpetrator and an innocent defendant might coincidentally share the same characteristic. But again, as with eyewitness testimony, there is no type of defendant who is immune to being mistakenly incriminated by trace evidence. For example, anyone with DNA could be incriminated by DNA evidence—it all depends on whether their DNA matches the DNA of a sample found at a crime scene.

⁵⁵ Admitting exculpatory profile evidence will infringe the equal protection rights of defendants who do not fit exculpatory profiles, but since their rights are more likely to be overridden, we focus here on profile evidence in its incriminating form.

So we see that both eyewitness testimony and trace evidence differ from profile evidence because, from the *ex ante* perspective of lawmakers, any type of innocent defendant can be mistakenly incriminated by them. This is important since our argument in Section 4 against admitting profile evidence relied on the premise that this evidence cannot mistakenly incriminate any type of defendant but can only incriminate defendants who fit incriminating profiles. Since the same premise is not true of eyewitness testimony and trace evidence, the same argument cannot be used to show that admitting these forms of evidence would violate equal protection.

5.2 The fact that profile evidence can only incriminate some types of defendants distinguishes it from a variety of kinds of evidence, even those that would seem to resemble profile evidence quite closely.⁵⁶ Consider motive evidence, such as “the defendant recently fought with the murder victim” or “the defendant stood to gain financially from the death of the victim.” Both motive and profile evidence exploit generalizations about what people who are similar to the defendant in some respect are more likely to do. Just as profile evidence can incriminate only defendants who fit profiles correlated with the types of crime they are accused of, motive evidence can incriminate only defendants who fit descriptions like “fought with the victim” or “stood to gain financially from the death of the victim.” The resemblance between profile

⁵⁶ The literature about statistical evidence at trial often discusses hypothetical scenarios such as *Gatecrasher*. Suppose camera footage shows that, on a particular day and time, one thousand people gathered in a stadium, but the ticket sales indicate that only fifty tickets were purchased. This means that 95 percent of the people in the stadium that day entered illegally by crashing the gates. Although we cannot tell who gatecrashed and who did not, it is very likely that any spectator picked at random did gatecrash. Our argument in Section 4 that admitting profile evidence would violate equal protection does not apply to Gatecrasher-like evidence because this kind of evidence can incriminate any defendant. From the *ex ante* point of view of lawmakers, there is no defendant who could not be incriminated by this evidence since anyone could find themselves at some event or other where a significant proportion of the attendees committed a certain crime. Those who regard profile evidence and Gatecrasher-like evidence as entirely on a par might insist on a unified account of their inadmissibility, which we have not provided. Still, the well-established intuition in the literature is only that Gatecrasher-like evidence is *insufficient* for a guilty verdict, not that it should be inadmissible. For early work on this puzzle, see, e.g., L.J. Cohen, *The Probable and the Provable* (Oxford: Oxford University Press, 1977); Charles R. Nesson, “Reasonable Doubt and Permissive Inferences: The Value of Complexity,” *Harvard Law Review* 92 (1979): 1187–1225; Judith Jarvis Thomson, “Liability and Individualized Evidence,” *Law and Contemporary Problems* 49 (1986): 199–219. For more recent work, see, e.g., Sarah Moss, *Probabilistic Knowledge*; Martin Smith, “When Does Evidence Suffice for Conviction?,” *Mind* 127 (2018): 1193–1218; and Clayton Littlejohn, “Truth, Knowledge, and the Standard of Proof in Criminal Law,” *Synthese* (forthcoming). For a risk-based argument against convictions that rest on gatecrasher-like evidence, see Marcello Di Bello, “Trial by Statistics: Is a High Probability of Guilt Enough to Convict?” *Mind* (forthcoming).

evidence and motive evidence is so close that scholars have struggled to find reasons for why the two kinds of evidence should be treated differently at trial.⁵⁷

Despite the close resemblance between profile evidence and motive evidence, we should not overlook a crucial difference between them which can be brought into clear focus by taking into account the *ex ante* perspective of lawmakers. Lawmakers can know, in advance of particular crimes, who would fit and who would not fit an incriminating profile. Defendants who do not fit any profile that is correlated with the type of crime they are accused of will be immune to mistaken incrimination by profile evidence. But lawmakers cannot know, in advance of particular crimes with particular victims, who would fall under such descriptions as “fought with the victim” or “stood to gain financially from the death of the victim.” Whether someone falls under some such description for a crime they are accused of will depend on the circumstances of that particular crime, and because the circumstances of particular crimes will vary, any innocent person could find themselves falling under some such description. To illustrate, any innocent person could have a motive to murder someone or other. If any of those people were ever murdered, this innocent person would then fall under some description like “stood to gain from the death of the victim” of that murder, and could be mistakenly incriminated by motive evidence. Thus, from the *ex ante* point of view of lawmakers, there is no one who is immune to mistaken incrimination by motive evidence.⁵⁸

The difference between profile evidence and other forms of evidence — namely, that profile evidence can only mistakenly incriminate some types of defendants and not others, while eyewitness, trace and motive evidence can incriminate any type of defendant — is not attributable to the fact that profile evidence is statistical while other kinds of evidence are not. Profile evidence is a form of statistical evidence, but eyewitness, trace, and motive evidence can also be presented together with statistical generalizations about, say, the typical error rates of eyewitnesses under certain conditions, the frequency of genetic profiles, or the likelihood that someone who fought with another person would later kill them. While the availability of such statistics at trial can help the fact-finders assess probative value correctly, it does not change the fact

⁵⁷ Michael Redmayne in *Character in the Criminal Trial* (Oxford: Oxford University Press, 2015) is skeptical that there is any reason to exclude character evidence like *Prior Burglary* that would not also be a reason to exclude motive evidence. Our account does identify such a reason since admitting bad character evidence like *Prior Burglary* would violate equal protection, but admitting bad motive evidence does not.

⁵⁸ To be sure, lawmakers cannot know who would end up committing burglary either. If they were to consider people at birth, they could not predict where people would end up in their adult lives. But the *ex ante* perspective of lawmakers is located in advance of particular trials, not behind a veil of ignorance. Before any particular trial for burglary, lawmakers can know who committed burglary before, but they can have no knowledge of the circumstances of particular crimes.

that eyewitness, trace, and motive evidence can mistakenly incriminate any type of innocent defendant, since the statistics in question do not constrain who can be incriminated by these forms of evidence.⁵⁹

6 RISKS OF INCRIMINATION VERSUS RISKS OF CONVICTION

We've explained how eyewitness testimony, trace evidence, and motive evidence could mistakenly incriminate any defendant, unlike profile evidence. This key difference means that the argument in Section 4, which showed why admitting profile evidence would threaten equal protection, is inapplicable to these other kinds of evidence. But even if that argument does not apply to them, there might be other grounds for thinking that their admissibility at trial would pose a threat to equal protection. Even though any innocent defendant can be mistakenly incriminated by these other kinds of evidence, what if some defendants are more likely to be mistakenly incriminated by them than others? We will argue that, although admitting eyewitness testimony and other kinds of evidence might well give rise to different risks of mistaken *incrimination*, this should not give rise to different risks of mistaken *conviction* if the probative value of the evidence is assessed correctly.

6.1 At first glance, there is no reason to think that there are any types of innocent defendants who would be more likely than others to be misidentified by an eyewitness, to misleadingly match a DNA sample found at a crime scene, or to have had a motive to commit a crime they have been falsely accused of. And if no types of innocent defendants are more likely to be mistakenly incriminated than any others by these kinds of evidence, then admitting them should not expose any defendants to a higher risk of mistaken conviction and thus would not threaten any defendants' rights to equal protection.

On closer examination, however, lawmakers could have reason to believe that some types of defendants would be more vulnerable to mistaken incrimination by these kinds of evidence than others. Lawmakers might, for example, have good reason to believe that some innocent defendants would be at a predictably higher risk of mistaken incrimination by eyewitness testimony compared to others. For one thing, eyewitnesses may be worse at identifying some types of defendants than others. Cross-racial

⁵⁹ The availability of statistics about the frequency of genetic profiles could, however, make it the case that defendants with genetic profiles that are statistically more common could not be as *strongly* incriminated by DNA trace evidence as defendants with less common genetic profiles. Similarly, statistics about the reliability of eyewitnesses identifications could make it the case that defendants with a more common appearance could not be as strongly incriminated as others. For a discussion of this point in terms of probative value, see Section 6.

identifications are known to be less reliable than intra-racial ones.⁶⁰ If eyewitnesses on average are less reliable at identifying black defendants than they are at identifying white defendants, then innocent black defendants could be more likely to be mistakenly incriminated by eyewitness testimony than innocent white defendants.⁶¹ And even when reliability is the same, there may be other reasons why some innocent defendants are at a higher risk of mistaken incrimination by eyewitness testimony than others. For example, since people who live in high crime areas will be seen near a crime scene more often, the risk that they would be misidentified as perpetrators would be higher compared to innocent people living in low crime areas even assuming that eyewitnesses are no more reliable at identifying people in low crime areas than in high crime areas.

It is tempting to conclude that these differences in the risk of *incrimination* automatically translate into differences in the risk of *conviction*. If, from the *ex ante* point of view, the bodies of evidence against one type of innocent defendant are more likely to contain a piece of incriminating eyewitness testimony than the bodies of evidence against other innocent defendants, and all else is equal, wouldn't it follow that the first type of defendant would be exposed to a higher risk of mistaken conviction? If this is correct, then some types of defendants will be more likely to be mistakenly convicted by eyewitness testimony than others, and their rights to equal protection would be infringed.

6.2 While this piece of reasoning sounds appealing, it contains a subtle mistake. Different risks of mistaken incrimination by eyewitness testimony need not, and should not, result in different risks of mistaken conviction. The first thing to note here is that eyewitness testimony, like any kind of evidence, should be assigned the right probative value. In order to assign evidence the right probative value, we must assess the risk that it would mistakenly incriminate an innocent defendant. The higher the risk of mistaken incrimination by the evidence, the lower the probative value of the evidence. After all, the more prone to error the evidence, the weaker the evidence. This is how evidence

⁶⁰ A meta-analysis found that an innocent black suspect has a 56% greater chance of being misidentified by a white eyewitness than by a black eyewitness. See C. A. Meissner and J. C. Brigham, "Thirty Years of Investigating the Own-race Bias in Memory for Faces: A Meta-analytic Review," *Psychology, Public Policy, and Law* 7 (2001): 3–35.

⁶¹ If we assume that a black defendant is more likely to be incriminated by a white eyewitness than a white defendant by a black eyewitness, the 56% difference (see previous footnote) would expose innocent black defendants to a higher risk of misidentification than innocent white defendants.

should be rationally weighed.⁶² Consequently, if people living in high crime areas are at higher risk of being mistakenly incriminated by eyewitness testimony, then eyewitness testimony against them should be assigned a lower probative value than eyewitness testimony against those who live in low crime areas. The same applies to testimonies against black versus white defendants.

The second thing to note is that, if fact-finders are rational, their readiness to convict on a body of evidence depends on the overall probative value of that body. This is the rational calibration principle we introduced in Section 4. If an eyewitness testimony against a defendant in a high crime area should be judged as less probative than a similar testimony against a defendant in a low crime area, adding the former testimony to the overall body of evidence should increase its probative value — and, by calibration, the risk of conviction — by less than the latter testimony. The same can be said of testimonies against black defendants as opposed to testimonies against white defendants.

So even though some defendants are at a predictably higher risk of mistaken incrimination by eyewitness evidence, this higher risk is offset by the fact that eyewitness evidence against them should be assigned a lower probative value. This lower probative value, by calibration, should lead to a smaller increase in the risk of conviction when eyewitness evidence is presented against innocent defendants whose risk of incrimination is higher. Thus, if fact-finders are rationally calibrated to the bodies of evidence against defendants, admitting eyewitness testimony would not subject innocent defendants who are at higher risk of mistaken incrimination to a higher risk of mistaken conviction.

This point generalizes to any form of evidence that exposes some defendants to a higher risk of mistaken incrimination than others, so long as the evidence is capable of mistakenly incriminating any type of defendant. For example, although the diagnostic power of DNA testing should be the same regardless of the individual being tested, different laboratories might follow different standards, and this might result in predictably different risks of false positive matches for different defendants. But if the match is the result of a laboratory analysis with a higher error rate, it should be assigned a lower probative value compared to a match resulting from a laboratory analysis with a

⁶² The strength or probative value of evidence E relative to a pair of competing hypotheses — in our case, the defendant's guilt G and innocence I — is measured by the likelihood ratio $\Pr(E/G)/\Pr(E/I)$. The higher $\Pr(E/G)/\Pr(E/I)$ (for values above one), the more probative of guilt the evidence. This also means that the higher $\Pr(E/I)$ — which tracks the risk of mistaken incrimination by evidence E — the lower the likelihood ratio and thus the lower the probative value of evidence E . See, e.g., Philip Dawid, "Bayes's Theorem and Weighing Evidence by Juries," in *Bayes's Theorem*, ed. Richard Swinburne (Oxford: Oxford University Press, 2002), 71–90, and Marcello Di Bello and Bart Verheij, "Evidential Reasoning," in *Handbook of Legal Reasoning and Argumentation*, eds. Giorgio Bongiovanni, Gerald J. Postema, Antonino Rotolo, Giovanni Sartor, Chiara Valentini, and Douglas Walton (Dordrecht: Springer, 2018), 447–493.

lower error rate.⁶³ Whenever some defendants — for whatever reason — are at higher risk of mistaken incrimination by DNA evidence, this higher risk should be offset by assigning it a lower probative value.⁶⁴

6.3 Let's take stock. We first argued that any type of innocent defendant can be mistakenly incriminated by forms of evidence such as eyewitness testimony, trace evidence, and motive evidence. But it does not follow from this that no type of defendant could be at higher risk of being mistakenly incriminated by these other forms of evidence, and in fact, some types of defendants may well be more likely to be mistakenly incriminated by them. Nevertheless, we showed that different risks of mistaken incrimination by these forms of evidence will not lead to different risks of mistaken conviction if the fact-finders assess their probative value correctly.

In order to adjust their assessment of the probative value of the evidence and prevent inequalities in the risks of mistaken conviction from arising, fact-finders will need to be informed about the risk of mistaken incrimination by that evidence. Equal protection, then, requires admitting various statistical generalizations at trial: error rates of laboratories that do DNA testing, statistics about the reliability of eyewitnesses in different circumstances, and so on. If the fact-finders are not given this information (and they often are not), admitting eyewitness testimony and other forms of evidence could violate equal protection. But there are already reasons of accuracy to give them this information.⁶⁵ In a well-functioning courtroom, then, admitting these forms of evidence would not violate equal protection.

This prompts a question. If a correct assessment of the probative value of eyewitness and trace evidence would prevent unequal risks of mistaken incrimination from yielding unequal risks of mistaken conviction, why wouldn't a correct assessment of the probative value of profile evidence do the same? Recall the key difference between these other forms of evidence and profile evidence: namely, eyewitness and trace

⁶³ Forensic scientists have recommended that laboratory error rates be taken into account while assessing the probative value of a DNA match; see, e.g., *Forensic DNA Evidence Interpretation (2nd edition)*, ed. John S. Buckleton, Jo-Anne Bright and Duncan Taylor (Boca Raton, FL: CRP Press, 2016).

⁶⁴ The frequency of genetic profiles also affects the risk of false positive DNA matches. The higher the frequency of the profile, the higher the risk of a false positive match. This differences in the risk of false positives can be offset by the right assessment of probative value. The forensic literature is clear that the probative value of DNA matches should reflect differences in the frequencies of profiles; see earlier footnote.

⁶⁵ Although there is typically no legal requirement that the fact-finders be informed about eyewitness reliability — see e.g. Laura Connelly, "Cross-Racial Identifications: Solutions to the 'They All Look Alike' Effect," *Michigan Journal of Race and Law* 21 (2015):125–145 — the Supreme Court of New Jersey has required jury instructions to inform jurors about sources of unreliability of eyewitness evidence; see *State v. Henderson*, 27 A.3d 872 (NJ 2011).

evidence can incriminate any defendant, while profile evidence can only incriminate defendants who fit incriminating profiles correlated with the type of crime they are accused of. If the fact-finders were to assess the probative value of, say, *Prior Burglary*, they should not regard this evidence as probative of the guilt of defendants who have not committed prior burglaries. They should, however, regard it as probative of the guilt of defendants who have committed prior burglaries—the stronger the correlation, the more probative the evidence.

Thus, if the probative value of profile evidence is assessed correctly, this evidence should be regarded as probative of guilt when it is presented against defendants who fit incriminating profiles, and should not be regarded as probative of guilt when it is presented against defendants who do not fit such profiles. Admitting this evidence at trial would therefore, by calibration, increase the risks of mistaken conviction for those who fit profiles but not for those who do not. The only assessments of its probative value that could preserve equal risks of mistaken conviction would be either to assign profile evidence no probative value against defendants who fit profiles or to assign it the same probative value against defendants who do not fit profiles as against defendants who do. But neither assessment is correct.

7 CONCLUSION

We set out to vindicate the intuition that admitting profile evidence at trial wrongs defendants. We showed why admitting profile evidence at trial would expose some defendants to a higher risk of mistaken conviction than others, infringing their rights to equal protection. Our account can also explain why admitting other forms of evidence, such as eyewitness testimony, trace evidence, and motive evidence would not be inconsistent with equal protection. Although admitting other forms of evidence can expose some defendants to a higher risk of mistaken incrimination than others, it will not expose them to higher risks of mistaken conviction, so long as the fact-finders properly assess the probative value of the evidence. But it is precisely when fact-finders assess the probative value of profile evidence correctly that admitting it would violate some defendants' equal protection rights. The fault lies with profile evidence, not with the fact-finders.

Our argument has been restricted to the question of the admissibility of profile evidence during the guilt phase of criminal trials. This is not the only criminal justice context in which profile evidence may be used. In closing, we will briefly compare our fairness-based objection to the use of profile evidence at trial with a similar objection to

the use of profile evidence in policing.⁶⁶ Just as we showed that admitting profile evidence at trial would expose some innocent defendants to a higher risk of mistaken conviction, a similar line of argument could be used to show that permitting profiling in policing would expose innocent citizens belonging to the profiled groups to a higher risk of mistaken stops and searches. Would these higher risks of mistaken stops and searches be unfair to those innocent citizens?⁶⁷

The fact that policing is a criminal justice context, governed by equality before the law, lends plausibility to the view that being exposed to a higher risk of mistaken stops and searches is unfair. On the other hand, some have argued that it would not be unreasonable to expect innocent citizens to accept a higher risk of such a burden when this would promote an important public good like security, provided that society displayed reciprocity along other dimensions.⁶⁸ And even if it would be unfair to impose higher (and uncompensated) risks of mistaken stops and searches on some innocent citizens for the sake of the public good of security, some have argued that it would not be unfair if the same group of innocent citizens who were exposed to a higher risk of stops by the practice of profiling also gained more security than others, so that they were net beneficiaries of the practice. This might be the case if the main victims of

⁶⁶ For a useful overview of definitions of racial profiling in policing and arguments for and against it, see Katerina Hadjimatheou, "Racial Profiling," in *The SAGE Encyclopedia of Surveillance, Security, and Privacy* (Thousand Oaks: Sage Publications, 2018).

⁶⁷ There appears to be some support for the view that they would be. Some scholars have argued that even an idealized form of racial profiling (i.e., rational and respectful) would be unfair, because it would disproportionately burden innocent members of the profiled race. For versions of this objection, see Randall Kennedy, *Race, Crime, and the Law* (New York: Vintage Books, 1997), 159–61, and Naomi Zack, *White Privilege and Black Rights: The Injustice of U.S. Police Racial Profiling and Homicide* (New York: Rowman & Littlefield, 2015), 55. As stated, this is an objection on behalf of a group, not individual citizens, but this objection could be recast in terms of risk, so that it ascribes individual citizens a complaint against being exposed to higher risks of mistaken stops and searches in virtue of fitting a certain profile. See Steven Durlauf, "Assessing Racial Profiling," *The Economic Journal* 116 (2001): 402–426.

⁶⁸ See Mathias Risse and Richard Zeckhauser, "Racial Profiling," *Philosophy & Public Affairs* 32 (2004): 131–70, 156–8; and David Boonin, *Should Race Matter?* (Cambridge: Cambridge University Press, 2011), 341–7. See also Deborah Hellman, "Racial Profiling and the Meaning of Racial Categories," in *Contemporary Debates in Applied Ethics*, 235–6, although she still objects to racial profiling on the grounds of the demeaning message that it sends.

guilty citizens belonging to the profiled group were other innocent citizens belonging to the same group.⁶⁹

Whether or not these considerations successfully defuse the charge of unfairness against the use of profile evidence in policing, we have shown that similar considerations would not defuse the charge of unfairness against the use of profile evidence at the trial stage. If our argument in Section 3 is correct, innocent defendants would still have a complaint against procedures that exposed them to a higher risk of mistaken conviction, even if these higher risks permitted a more efficient reduction in crime. There is also an important difference between citizens who are affected by higher risks of mistaken stops and searches, and defendants who are affected by higher risks of mistaken convictions. Perhaps higher risks of mistaken stops and searches could be justified to innocent citizens belonging to the profiled groups, since it may be in their overall interests as citizens to accept a higher risk of mistaken stops in exchange for a lower risk of victimization. But even if a higher risk of mistaken conviction would be in their overall interests as innocent citizens, because the main victims of guilty members of a profiled group were, say, other innocent members of the same profiled group, it would not be in their overall interests as innocent defendants, and it is to defendants that unequal risks of mistaken conviction must be justified.⁷⁰

⁶⁹ See Mathias Risse and Richard Zeckhauser, "Racial Profiling," 158–60; David Boonin, *Should Race Matter?*, 341–2. For reasons to doubt that innocent black Americans would be net beneficiaries of racial profiling, see Lever, "Racial Profiling," 433–4 and Kennedy, *Race, Crime, and the Law*, 153. For an argument that even if black Americans were net beneficiaries, this cannot comprehensively justify racial profiling, see Kasper Lippert-Rasmussen, *Born Free and Equal?* (Oxford: Oxford University Press, 2013), 285–301. It should also be pointed out that the magnitude of the burdens of stops and searches is greater for blacks than for whites. When the targeted group is subject to background injustice and stereotyping, stops and searches are more frequently experienced as humiliating; see Paul Bou-Habib, "Racial Profiling and Background Injustice," *The Journal of Ethics* 15 (2011): 33–46.

⁷⁰ On this, see the argument in 3.3.